

REMARKS

Claims 1-32 were pending prior to this response. Independent claims 1, 12, and 15 are currently amended to clarify the claimed subject matter. Claims 2, 3, 13 and 16 have been incorporated into their respective base claims and cancelled. Claims 4, 14, and 17 have been amended for claim numbering in light of the cancelled claims. Claims 1, 4-12, 14-15, 17-32 are now pending. Applicant respectfully request reconsideration and allowance of the present application in light of the following remarks.

§101 Rejections

Respectfully, the portion of the Office Action on p. 2 addressing §101 rejections it is not clear. Applicant is unsure what claims and what basis the Examiner intended for the rejections. Clarification is respectfully requested.

For instance, p. 2 of the Office Action initially indicates claims 1-5, 7-14, 28-32 are directed to non-statutory subject matter without explanation. Further, the brevity of the rejection makes it difficult for the Applicant to respond or correct any deficiency. If it was the intention of the examiner to reject these claims, a more detailed explanation is respectfully requested in order that the Applicant may have an adequate opportunity to respond.

Further, because other claims groupings are discussed, Applicant is unclear which claims the Examiner intended to reject. While claims 1-5, 7-14, 28-32 are initially listed, the second paragraph of the §101 rejection discusses claims 22-27. Then the §101 rejection passage concludes indicating that "claims 25-32 are non statutory". Examiner may appreciate the Applicant's confusion as to which set of claims and upon what basis the examiner intended to make a §101 rejection.

Pending clarification, the Applicant submits that the cited claims are directed to statutory-subject matter.

§102 Rejections

Claims 1-4, 11-13, 22-23, 28 and 30-31 are rejected under 35 U.S.C. §102(e) as being anticipated by International Publication Number W0 01/75736 to Arora et al. (hereinafter "Arora"). The applicant respectfully disagrees however, to expedite issuance of the subject application amendments have been made to clarify the claimed subject matter.

Arora relates to a system for matching desired characteristics or values with item attributes stored in an electronic database. The values of each attribute to be matched are associated with a weight in order to specify the priority of each attribute. The weights may be assigned by various methods, like defaults, set by an administrator, or user. Items are stored in the database along with associated attributes, values and a weight attached to each attribute. Table 1 shows an exemplary table with at least three columns. One column is depicted for attributes, a second column for values of the attributes, and a third column for a weight. Usually, even more than three columns are included as each new value or attribute adds two new columns – one for the values and one for the associated weighting. A user searching the database for an item can enter preferences for different attributes. Arora makes a weighted comparison of the set of attributes between the user's preferences and values in the database. *Arora*, p.4 ll. 9-15. Thus, a comparison is made with regard to two sides such as a buyer and a seller to generate an overall match score. However, Arora fails to describe numerous

subsets of attributes (e.g., user preferences) and comparison of the priority sums of those values.

Applicant makes reference to the subject application FIG. 8 depicting one example of the claimed subject matter and which illustrates the salient features of the Applicant's invention which Arora lacks. FIG. 8 depicts multiple subsets of target criteria 700, 802, 804, 806, 808 each including one or more of type of attributes and corresponding values. A priority sum 810,812,814,816,818 is associated with each subset of target criteria. For instance, First Target 700 includes the attributes language, country, age range. Second Target 802 includes language, and so forth

Assume, the entire set of attributes includes Language, Country, Age Range, Gender such as depicted in attributes table 400 in FIG 8. Each target criteria group in FIG. 8 contains a subset of the attributes and a corresponding priority sum. It is these subsets of the overall set of attributes from attributes table 400 and comparison of the corresponding priorities thereof which the present application and claims are directed towards. Thus, the applicant describes a comparison of different target criteria subsets.

Arora simply fails to disclose the subject matter of the present application such as the provided example of FIG. 8. In particular, Arora describes a total score based on weighted matching of preferences to a target, and not a comparison of sets of criteria. In the previous example, in accordance with Arora a user may set weighting or priority for each of the attributes Language, Country, Age Range, Gender. Further, a party on the opposite side of a transaction (e.g. buyer and seller) may do likewise. A total score is determined by matching each of the attributes and applying the weighting. Thus, Arora does describe comparing or

matching individual attributes. However, Arora fails to describe subsets of attributes which are compared one to another. In Arora, a total score is obtained based on one set of attributes, e.g., user selected preferences. Accordingly, there is nothing in Arora that discloses the subsets, subset priorities or comparisons thereof as disclosed in the present application. While a total sum is calculated for an entire set of attributes, it is not compared to another subset of the group of attributes as described and presently claimed.

Further, the basic principle of Arora is based upon comparison of individual values of the attributes. The present invention applies a completely different matching principle, in which priority sums are calculated for sets of attributes first. Subsequently, sets of attributes are matched, i.e. compared and differentiated according to their respective priority sums. Arora does not describe matching based on priority sums of attributes. Rather, as near as the applicant can understand each attribute value is separately matched first and then the total score is arrived at after the matching based upon the matching of criteria to values. Thus, no priority sum comparison of subsets of attributes is disclosed. As should be apparent, Arora fails to disclose comparison of criteria to criteria. For at least these reasons applicant believes that the present claims are not anticipated by Arora.

Independent claims 1, 12, 15, 22, and 28 each recite features which Arora fails to disclose for the previously described reasons. Claim 1 for instance has been amended to include the features previously recited in claims 2 and 3. Applicant respectfully disagrees that Arora provides a basis for rejecting the subject matter of former claims 2 and 3. Accordingly, the rejection of those claims will be discussed.

Claim 1 as amended (portion of the amendment appear in bold italic)

presently recites a method, comprising:

- establishing an extensible list of attributes of various information resources in an information system and ***assigning a priority weight to each of the attributes in the list of attributes***, wherein each information resource can be classified according to one or more attributes;
- establishing an extensible list of values for the attributes in the extensible list of attributes, wherein each value is associated in the list with its corresponding attribute;
- selecting a first set of one or more of the values from the extensible list of values to be a first set of target criteria to designate a subset of the information resources; ***wherein the priority weights of each attribute associated with a value in the first set of target criteria are added to obtain a priority sum for the first set of target criteria***;
- ***selecting additional sets of target criteria to designate a spectrum of subsets of the information resources; and***
- ***comparing a priority sum of each additional set of target criteria to the priority sum of the first set of target criteria to determine whether the particular one of the additional sets of target criteria designates a more general or a more specific subset of information resources than designated by the first set of target criteria.***

In regards to “adding the priority weights of each attribute associated with a value in the first set of target criteria to obtain a priority sum for the first set of target criteria and selecting additional sets of target criteria to designate a spectrum of subsets of the information resources” previously recited in claim 2, the Office asserts that “Arora’s total score is equivalent to the priority sum”. *Office Action p.*

4. Applicant disagrees. As previously described Arora indicates a total score as a result of matching individual criteria against a target. This is not equivalent to “adding the priority weights of each attribute associated with a value in the first set of target criteria to obtain a priority sum for the first set of target criteria and selecting additional sets of target criteria to designate a spectrum of subsets of the

information resources, wherein a priority sum of each additional set of target criteria is compared to the priority sum of the first set of target criteria" as now recited in claim 1.

Applicant notes specifically that claim 1 recites "wherein a priority sum of each additional set of target criteria is compared to the priority sum of the first set of target criteria". A total score for one set of values (e.g. buyer preferences in Arora) based upon a matching to a target (seller) is not equivalent to multiple subsets of criteria each having associated priority sums and compared one to another.

A simple example is provided to clarify this point. In the case of a buyer seeking a car, Arora is limited to producing a total match score based on the weighted matching of buyer preferences (model, year, color etc.) to an offered target car. However, Applicant describes a system which in the present example may define a number of subsets of the buyer preferences, each subset having associated priority sums which are compared one to another. For instance one set may be model and year, another color, another color and model and so on. Thus, the comparison described and claimed in claim 1 is between the criteria subsets.

Arora calculates one total score for a target based on all the criteria of the user matched to a single target, thus an indication of the matching of criteria to a target. In the case of a car buyer Arora may calculate a total score for two different cars, however the same set of user preferences are used for each associated total score. Accordingly, Arora's total score for an entire matching operation e.g., indication of the match itself is not equivalent to the claimed priority sum which indicates the priority associated with different sets of criteria. In other words the total score of Arora addresses the closeness of a match itself,

while the priority sums presently claimed indicates the priority or weight associated with particular sets and sub sets of criteria, e.g. prior to the actual matching. Claim 1 is allowable over Arora for at least this reason.

Further, there is no comparison in Arora of priority values of subsets of criteria from the list of user preferences. Arora indicates only that a total score may be determined, which as stated is not equivalent to priority sums. While Applicant does not believe the total score is equivalent to the claimed priority sums, assuming for the sake of argument only that total score is a basis for the claimed priority sums, Arora still fails to disclose the comparison of total scores one to another. Arora is silent on this recited feature of claim 1. Thus, Claim 1 is allowable over Arora for this additional reason.

In regards to "additional sets of target criteria" the Office Action The cites page 6 line 20-33 for "Arora's employee characteristics" as a first set of target criteria. The Office Action then asserts that "Arora's function can handle any finite number of attributes" is equivalent to the claimed additional set. *Office action p. 4*. Respectfully, this misinterprets the claim and Arora. The matching process of Arora is based upon a single set of criteria e.g. user preferences which are used to determine a match score. There is absolutely no indication in Arora that multiple sets of criteria are involved. Arora for instance does not disclose different subsets of employee characteristics which are compared one to another. Rather, in Arora user preferences are used to determine a total score for a target. The cited passage only indicates that the particular attributes in the set of criteria in Arora may be changed, e.g. more or less categories may be used in a particular matching operation. *Arora, p. 7 ll. 15-17*. However in any particular match, the same set of criteria is used. To do otherwise in Arora would change the basis

between targets and would defeat the matching principle described in Arora. Accordingly, Arora does not provide a basis for the claimed "additional sets of target criteria" as recited in claim 1.

Further, in addition to the previously discussed deficiencies in Arora, there is no basis in Arora for the recited feature "to determine whether the particular one of the additional sets of target criteria designates a more general or a more specific subset of information resources than designated by the first set of target criteria". The examiner does not provide a basis in Arora for this recited feature of claim 1 and applicant submits that no such determination is disclosed in Arora. Claim 1 is allowable for this additional reason. Claim 1 is allowable for at least the foregoing reasons and withdrawal of the §102 rejection is respectfully requested.

Claims 4-11 depend from claim 1 and are allowable at least on the basis of this dependency. They are also allowable for their own recited feature which the prior art of record fails to disclose, teach or suggest.

Claim 12 is amended to include features previously recited in claim 13. Claim 12 as amended (portions of the amendment in bold italics) recites a data structure, comprising:

- an extensible table of attributes, wherein various content elements in an information system possess values of the attributes and wherein each attribute in the extensible table of attributes is associated with a priority weight;
- an extensible table of values of the attributes, wherein each value is associated with its corresponding attribute; and
- ***multiple sets of one or more values to designate multiple subsets of content elements***, wherein a priority weight of each attribute associated with each value in *each* set is summed to determine a priority sum of the *respective* set and ***the priority sums of respective sets in the multiple sets can be compared to determine similarities and differences between subsets of content elements designated by the multiple sets.***

Arora as previously described, does not disclose numerous subsets of criteria, priority sums of criteria subsets and/or comparisons thereof in accordance with the present application. Accordingly, Arora fails to disclose **“multiple sets of one or more values to designate multiple subsets of content elements . . . wherein priority sums of respective sets in the multiple sets can be compared to determine similarities and differences between subsets of content elements designated by the multiple sets”** (emphasis added) as recited in claim 12. Claim 12 is allowable for at least these reasons.

Further, in addition to the previously discussed deficiencies in Arora, there is no basis in Arora for the recited feature “to determine similarities and differences between subsets of content elements designated by the multiple sets”. The examiner does not provide a basis in Arora for this recited feature of claim 12 and applicant submits that no such determination is disclosed in Arora. Claim 12 is allowable for at least these reasons and withdrawal of the §102 rejection is respectfully requested.

Claim 14 is allowable at least based upon its dependency to claim 12.

Original Independent Claim 22 recites one or more computer readable media containing instructions that are executable by a computer to perform actions, comprising:

- associating priority weight values with attributes in a dynamic list of attributes associated with information resources in an information system;
- associating instances of attribute values with corresponding attributes in a dynamic list of attribute values;
- designating subsets of the information resources based on sets of one or more of the attribute values;
- comparing the sets of one or more attribute values according to respective priority sums, wherein a priority sum is obtained by summing priority weight values associated with each attribute value in a set of one or more of the attribute values.

Arora as previously described, does not disclose numerous subsets of criteria, priority sums of criteria subsets and/or comparisons thereof in accordance with the present application. Accordingly, Arora also fails to disclose **“designating subsets of the information resources based on sets of one or more of the attribute values”** and **“comparing the sets of one or more attribute values according to respective priority sums,** wherein a priority sum is obtained by **summing priority weight values associated with each attribute value in a set of one or more of the attribute values”** (emphasis added) as recited in claim 22. Claim 22 is allowable for at least these reasons and withdrawal of the §102 rejection is respectfully requested.

Claims 23-27 are allowable at least based upon their dependency to claim 15.

Original Independent Claim 28 recites an information system, comprising:

- information resources having attributes;
- an extensible table of the attributes, wherein each attribute is assigned a weight;
- an extensible table of values for the attributes, wherein each value is associated with its corresponding attribute;
- sets of the values, wherein each set specifies a subset of the information resources and each set can be differentiated by the sum of the weights of each attribute represented by a value in each set.

Arora as previously described, does not disclose numerous subsets of criteria, priority sums of criteria subsets and/or comparisons thereof in accordance with the present application. Accordingly, Arora also fails to disclose “sets of the values, wherein each set specifies a subset of the information resources and each set can be differentiated by the sum of the weights of each attribute represented by a value

in each set” (emphasis added) as recited in claim 28. Claim 28 is allowable for at least these reasons and withdrawal of the §102 rejection is respectfully requested.

Claims 29-32 are allowable at least based upon their dependency to claim 28.

§103 Rejections

Claims 5-6, 14-21, 24-25 and 32 are rejected under 35 U.S.C. §103 as being obvious over Arora in further view of U.S. Patent Publication 2003/0130887 to Nathaniel et. al (hereinafter “Nathaniel”). Applicant respectfully disagrees.

Independent Claim 15 is amended to include features previously recited in claim 16. Claim 16 is cancelled. Claim 15 as amended (portions of the amendment in bold italics) recites a content management engine, comprising:

- a classification engine to determine attributes of information resources in an information system;
- an attribute table manager in communication with a dynamic table of attributes and priorities;
- a prioritizer to assign priority weights to each attribute in the attribute table;
- a values table manager in communication with a dynamic table of values, wherein each value and its associated attribute possessed by one of the information resources is represented in the values table;
- a target criteria engine to create target criteria sets of one or more of the values, wherein a target criteria set designates a subset of the information resources in the information system based on the one or more values; and
- a localization engine to make information resources in the subset available to a user of the information system, ***having a target criteria set comparator to compare a priority sum of a first target criteria set to a priority sum of a second target criteria set, wherein a priority sum is the sum of the priority weights of the values in a given target criteria set.***

Arora as previously described, does not disclose numerous subsets of criteria, priority sums of criteria subsets and/or comparisons thereof in accordance

with the present application. Accordingly, Arora also fails to disclose “a target criteria set comparator to compare a priority sum of a first target criteria set to a priority sum of a second target criteria set, wherein a priority sum is the sum of the priority weights of the values in a given target criteria set” (emphasis added) as recited in claim 15. Nathaniel does not correct the previously described defects in Arora, such as Arora’s failure to disclose criteria subsets, priority sums of criteria subsets and comparisons thereof. The office relies does not rely on Nathaniel for these features. Accordingly, Claim 15 is allowable for at least these reasons.

Claims 17-21 are allowable at least based upon their dependency to claim 15.

Claims 5-6, 14, 24-25 and 32 depend respectively from independent claims 1, 12, 22 and 28 respectively and are accordingly allowable as previously discussed. Nathaniel does not correct the previously described defects in Arora, such as Arora’s failure to disclose criteria subsets, priority sums of criteria subsets and comparisons thereof. The §103 rejection of claims 4-5, 14, 24-25 and 32 should be withdrawn at least on the basis of this dependency. Claims 5-6, 14, 17-21, 24-25 and 32 are also allowable for their own recited features which Arora and Nathaniel, alone or in combination, do not teach or suggest.

103 Rejections

Claims 7-10, 26-27 and 29 are rejected under 35 U.S.C. §103 as being obvious over Arora in view over U.S. Patent Publication 2002/0032638 to Arora et. al (hereinafter "Arora '638"). Applicant respectfully disagrees.

Claims 7-10, 26-27 and 29 depend respectively from independent claims 1, 22 and 28 respectively and are accordingly allowable as previously discussed. Arora '638 does not correct the previously described defects in Arora, such as Arora's failure to disclose criteria subsets, priority sums of criteria subsets and comparisons thereof. The §103 rejection of claims 7-10, 26-27 and 29 should be withdrawn at least on the basis of this dependency.

Claims 7-10, 26-27 and 29 are also allowable for their own recited features which Arora and Arora '638, alone or in combination, do not teach or suggest.

For instance, **Claim 7** recites "wherein a database structure of the information system remains unchanged during expansion and contraction of the extensible list of attributes and the extensible list of values". The Office Action on p. 22 acknowledges that "Arora fails to disclose that a database structure of the information system remains unchanged during expansion and contraction of the extensible list of attributes and the extensible list of values"

The examiner cites Arora '638 paragraph [0049] for "indicated that the configurator is customizable with any number or type of market descriptor variables". This is not a basis for the recited features of claim 7. The cited portion indicates only that the number and type of variables may be changed and does not indicate that the database structure remains unchanged as described and claimed in claim 7. For instance, adding a new descriptor per Arora '638 would add a new field to the database changing the structure. In fact, the term customizable implies

that the structure of the configuration is altered. Arora '638 like Arora is silent on "wherein a database structure of the information system remains unchanged during expansion and contraction of the extensible list of attributes and the extensible list of values". Applicant however describes an extensible structure for the attribute table 400 and values table 500. *See Fig. 5, Specification, p. 9 l. 14 – p. 10 l.19.* Arora and Arora '638 fail to teach or suggest all the recited feature of claim 7 and accordingly claim 7 is allowable for this additional reason.

In any event, Arora discloses only Table I which clearly has a structure in which the addition of attributes changes the Table. As previously described, in Arora items are stored in the database along with associated attributes, values and a weight attached to each attribute. Table 1 shows an exemplary table with at least three columns. One column is depicted for attributes, a second column for values of the attributes, and a third column for a weight. Usually, even more than three columns are include as each new value or attribute adds two new columns – one for the values and one for the associated weighting. *See Arora, Table I.* Thus, Arora disclose a database in which the database structure of the information system would change during expansion and contraction of the extensible list of attributes and the extensible list of values, which is contrary to claim 7. Modifying Arora as proposed would alter the structure to which Arora is directed and accordingly would change the principle upon which Arora operates. Accordingly, the proposed combination is in error for this reason. *See MPEP § 2143.01*(the proposed modification cannot change the principle of operation of a reference).

Conclusion

Applicant believes that claims 1, 4-5, 12, 14-15, 17-32 are in a condition for allowance. Reconsideration of the subject application and forwarding to allowance is respectfully requested. The Examiner is encouraged to contact the undersigned Attorney to resolve any outstanding issues which may prevent allowance.

Respectfully Submitted,

Dated: _____

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By: _____

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